

**3.9.8 Typical School Building (1)**

	<u>Pre-1980</u>	<u>Post-1980</u>
<b>Stock Floor Area (billion SF)</b>	7.5	0.6
<b>Floor-Area Weighted Averages</b>		
Building Area (thousand SF)	22 - 47	16 - 26
Floors	2	2
<b>Shell</b>		
Percent Glass	27.0	18.0
Window R-Value	1.39 - 1.6	1.67 - 1.71
Window Shading Coefficient	0.80 - 0.83	0.71 - 0.73
Wall R-Value	2.7 - 3.4	5.3 - 5.7
Roof R-Value	10.1 - 10.9	12.6 - 13.3
Wall Material	masonry	masonry
Roof Material	built-up	built-up
<b>Occupancy</b>		
Average Occupancy (SF/person)	105	105
Weekday Hours (hrs/day)	8.0	8.0
Weekend Hours (hrs/day)	2.0	2.0
<b>Equipment</b>		
Average Power Density (W/SF)	0.8	0.8
Full Equipment Hours (hrs/year)	1,136	1,136
<b>Lighting</b>		
Average Power Density (W/SF)	1.8	1.7
Full Lighting Hours (hrs/year)	2,436	2,436
<b>System and Plant</b>		
System and Distribution Type	6 (Classrooms, Gym, Auditorium, Dining, Kitchen) Unit Ventilators	1 Central System Packaged Multi-Zone w/ Economizer
Heating Plant	Gas Boiler	Gas Boiler
Cooling Plant	Hermetic Centrifugal Chiller	Hermetic Centrifugal Chiller
Service Hot Water	Gas Boiler	Gas Boiler

Note(s): 1) The prototypes are synthetic buildings compiled from statistical data from building surveys or conclusions from previous studies. The physical characteristics, system characteristics, and usage patterns are based upon various surveys, studies, engineering estimates, or engineering judgment.

Source(s): LBNL, Commercial Heating and Cooling Loads Component Analysis, June 1998, Table 15, p. 36; and D&R for hours of occupancy.